

**Summary Minutes of the
U.S. Environmental Protection Agency (EPA)
Clean Air Scientific Advisory Committee
Air Monitoring and Methods Subcommittee (AMMS) Review of EPA's Draft Near-Road
Technical Assistance Document
Public Teleconference**

Date and Time: Thursday, November 17, 2011, 12:30 P.M. – 3:00 P.M. ET

Location: Teleconference Only

Purpose: The purpose of the November 17, 2011 teleconference call was for the EPA Clean Air Scientific Advisory Committee Air Monitoring and Methods Subcommittee (AMMS) to discuss the AMMS draft report on EPA's draft Near Road Technical Assistance Document (TAD).

Participants:

AMMS: CASAC Air Monitoring and Methods Subcommittee (See Roster, Attachment A):

Dr. Armistead (Ted) Russell, Chair
Dr. David T. Allen
Mr. George A. Allen
Dr. Linda Bonanno
Dr. Doug Burns
Dr. Judith Chow
Dr. Kenneth Demerjian
Mr. Eric Edgerton
Mr. Henry (Dirk) Felton
Dr. Philip Fine
Dr. Philip Hopke
Dr. Rudolf Husar
Dr. Daniel Jacob
Dr. Peter H. McMurry
Dr. Allen Robinson
Dr. James Jay Schauer
Dr. Jay Turner
Dr. Yousheng Zeng

Drs. Linda Bonanno, Philip Fine, Philip Hopke and Daniel Jacob could not participate during the November 17, 2011 teleconference call.

EPA SAB Staff: Mr. Edward Hanlon, Designated Federal Officer

EPA Staff: Mr. Nealson Watkins, EPA Office of Air Quality Planning and Standards

Other Attendees: A list of members of the public who participated or requested information for calling into the teleconference is provided in Attachment B, Public Attendance.

Materials Available: The agenda and teleconference materials were circulated to the AMMS in advance of the teleconference, and were made available to the public via the CASAC website (www.epa.gov/casac) on the following CASAC AMMS Near-Road November 17, 2011 teleconference webpage:

<http://yosemite.epa.gov/sab/sabproduct.nsf/bf498bd32a1c7fdf85257242006dd6cb/8326c3e4aab377028525792e0057b516!OpenDocument&Date=2011-11-17>

Teleconference Summary

The teleconference was announced in the Federal Register¹ and proceeded according to the teleconference agenda². A summary of the teleconference follows.

November 17, 2011

Opening Statements and Welcome

Mr. Ed Hanlon, the Designated Federal Officer (DFO), opened the teleconference, and made a brief opening statement noting that the AMMS is a Federal Advisory Committee under the Federal Advisory Committee Act (FACA). He noted the teleconference was open to the public and that Agency-provided briefing materials were posted onto the teleconference websites. He stated that on 10/27/11, the Panel received a draft CASAC Report on “*Review of the Near-Road Technical Assistance Document*” for review. He noted that this draft Report was the subject of discussion for the teleconference, and incorporated key points made by the AMMS Panel during and after the September 29, 2011 AMMS Panel public teleconference. He stated that on 10/27/11, the draft CASAC Near-Road Review Report was posted onto the 11/17/11 CASAC teleconference website. He stated that no members of the public had requested to present an oral statement during the 11/17/11 teleconference, and that no sets of written public comments for the 11/17/11 teleconference were received. He noted that the SAB Staff Office has determined that there are no conflict-of-interest or appearance of a lack of impartiality issues for any of the AMMS Panel members for this review. He noted that minutes of the teleconference were being taken to summarize discussions and action items in accordance with requirements under FACA. He then turned the teleconference call over to the Chair, Dr. Ted Russell.

Dr. Russell welcomed everyone and noted that this is an Advisory effort where a report seeking consensus would be prepared. Dr. Russell noted that the 10/27/11 draft CASAC Near-Road Report would be revised after the teleconference and include the consensus position of the Panel and separate individual comments associated with this review. Dr. Russell noted he would start discussion on the draft report’s letter to the Administrator, and then discuss the Panel’s detailed comments to the draft report’s responses to each Charge Question. Dr. Russell reviewed the agenda, and then requested that EPA commence with their presentation.

EPA Presentation

Mr. Nealson Watkins, EPA Office of Air Quality Planning and Standards, made a brief opening statement. He noted that in response to preliminary advice EPA heard during the September 29, 2011 AMMS Panel public teleconference, the objectives for Near-Road monitoring will be clarified in the draft TAD. He noted that EPA will identify who is to be protected through the Near-Road monitoring, and commented that exposures to people on and near the road, including commuters, would be covered in the TAD. He also noted that EPA would add hypothetical situations to the TAD describing how to locate a monitoring site. He also noted that details and tables will be added in an appendix to further describe the HD_m multiplier that represents the heavy-duty to light-duty NO_x emission ratio for a particular road segment. He also noted that EPA will add a section to the TAD discussing how to locate second monitors.

Mr. Watkins noted that the TAD will add more details on how safety would be addressed through the Near-Road Monitoring. He also noted that regarding prioritization of pollutants in the Near-Road monitoring planning, ozone was moved up to high priority, and commented that ozone monitors could not determine ozone free environments. He also noted that EPA would be preparing a quick start guide that will point out highlights including traffic, roadway design, and other issues. The guide will identify what is required vs. recommended (e.g., monitoring at 20 vs. 50 meters), note that monitors within 20 meters is highly recommended, and indicate that ‘as close as practicable’ to the roadway is the goal.

One Panel member asked whether the Panel should respond to the revisions Mr. Watkins noted would be made to the draft TAD. Dr. Russell responded that the Panel should be reviewing the draft TAD that was submitted to the Panel for review.

Discussion of Letter to the Administrator

Dr. Russell led a discussion on the Panel’s comments on the draft report’s letter to the Administrator. A few Panel members recommended deleting a paragraph on the second page that discussed the need to continue to characterize exposures to the broader populations in urban areas, and noted that these recommendations went beyond the scope of the review. Another member recommended that this paragraph be left in the letter. Dr. Russell suggested moving the paragraph to the end of the letter and including a note that this advice was beyond scope of the Charge Questions. The Panel agreed to move and adjust the paragraph as suggested by Dr. Russell.

A Panel member requested that the letter recommend that the TAD discuss how to conduct monitoring on roadways. Several Panel members noted there are safety and instrumental reasons for why on-road monitoring is not practical. The Panel agreed to add a sentence noting that the dominant exposure is on the roadways, as determined through modeling. The Panel also discussed and agreed to delete a clause that referred to locating second monitors near heavy diesel traffic.

Discussion of Draft Responses to Charge Questions

Dr. Russell requested that discussion commence on the review of the AMMS draft responses to Charge Questions.

Charge Question 1 – Objectives and Rationale for the Draft TAD

One Panel member read a revised first paragraph of the response, and noted the revision was made to improve the clarity of the response. The Panel indicated the revised paragraph was acceptable.

Charge Question 2 – Near-Road NO₂ Site Selection Process

A Panel member noted there were some inconsistencies within the draft CASAC report on whether monitoring should occur at 20 or 50 meters from roadways. The Panel agreed to revise the discussion on this topic in the response to Charge Question 5.

One Panel member suggested that one sentence be revised to note that the TAD should more clearly address the issue of location of the site within a distance of 0-50 meters of the roadway. The Panel agreed to this revision.

Charge Question 3 - Fleet Equivalent Annual Average Daily Traffic Metric

The Panel discussed point 5 regarding whether the Panel should recommend that a quantitative treatment of traffic congestion must be developed as a critically important component to exposure assessment. Mr. Watkins noted that there is an incomplete data set on this topic, and noted that uncertainty exists on how states should proceed without a complete data set. Upon discussion, the Panel agreed to soften this draft text on point number 5 regarding the requirements for such quantitative analyses.

Question 4 – Roadway Pollutant Dispersion

One Panel member expressed concern about leaving Figure 6-2 in the draft TAD. The Panel member noted that the figure was not representative of particles in the size range depicted in the TAD, and noted that the loss depicted in the figure was not conservative. The Panel member also noted that the discussion surrounding this figure in the TAD was not a study on the behavior of 0 to 20 meter particles. The Panel member noted it was acceptable to discuss the distribution of particles at the prescribed distance indicated in the figure. The Panel agreed to revise the text to incorporate these concerns.

A Panel member requested certain wording changes regarding the discussion avoiding monitoring near lakes and ponds and during cold weather seasons. After discussion, the Panel agreed to change the draft response.

Charge Question 5 – Siting Requirements and Monitoring Probes

The Panel discussed CASAC's advice on whether monitoring should occur at 20 or 50 meters from roadways. The Panel discussed chemical reactions that affected pollutants and pollutant concentrations that occurred at distance from roadways. The Panel agreed to delete the text indicating the TAD was not at all clear that the recommendation of <20 meters separation between roadway and monitor will permit sufficient time for the NO-O₃ reaction to produce maximum NO₂.

The Panel also discussed the preferred height of the monitor. The Panel agreed that decisions on the height of the monitor should take into account where the height of likely exposure would

occur, and should be 2-7 meters from the ground.

Charge Question 6 – Exploratory Monitoring in the Near-Road Site Selection Process

The Panel discussed and agreed to prioritize the order of reasonable exploratory monitoring options that were presented in the response. The Panel discussed the priority for the options and agreed on which options were higher or lower priority. The Panel also agreed to change ‘necessary’ to ‘desirable’ in the second to last sentence.

Charge Question 7 – Use of AERMOD and MOVES Dispersion Modeling

Dr. Russell requested comments on the Charge Question 7 draft response and the Panel had no changes to recommend.

Charge Question 8 – Characterization of Individual Candidate Road Sites

The Panel discussed and agreed to revise text to note that representativeness of the monitoring site should also avoid tunnels and acceleration ramps. The Panel also agreed to revise the bullet on existing monitoring sites to improve the clarity of the text. The Panel also agreed to remove the sentence that noted that Section 10 was mislabeled.

Charge Question 9 - Transportation Agency Policies and Expectations

The Panel discussed whether the U.S. Department of Transportation (DOT) had a legal requirement to participate in the Near-Road monitoring program, and Mr. Watkins responded that it was his understanding that DOT was not required to participate. Dr. Russell requested other comments on the Charge Question 9 draft response and the Panel had no changes to recommend.

Charge Question 10 - Site Comparison Matrix

The Panel discussed but did not change text regarding the application of local knowledge in assessing sites. Dr. Russell requested other comments on the Charge Question 10 draft response and the Panel had no changes to recommend.

Charge Question 11 - Pollutants and Metrics of Interest in the Near-Road Environment,

The Panel discussed and agreed to adjust the wording regarding particle size to note that particle size concentration (preferable) or particle number concentration were both considered secondary group recommendations. The Panel also discussed and agreed that ozone should be a primary group recommendation. The Panel also agreed to adjust the paragraph discussing the secondary group recommendations for consistency with wording changes made in the primary and secondary group recommendation lists.

Dr. Russell then discussed next steps and action items. He noted that the Panel identified consensus language for changes to the draft cover letter and body of the draft CASAC report, and that a few Panel members agreed to provide the DFO with revised draft language or references that would be added to certain sections of the body of the draft CASAC report after the teleconference.

Dr. Russell then noted that he and the DFO would incorporate those edits into a revised draft Report that would be sent back to the Panel for review and concurrence to send to the chartered CASAC for quality review and approval. He noted that the revised draft Report would be publicly available for review when posted onto the CASAC Quality Review teleconference call website once that teleconference call was scheduled and the website made active. He asked if Panel members agreed to send the draft report as revised per discussion on the teleconference to the chartered CASAC for quality review and approval. There were no objections from the Panel to send the draft report as revised to the chartered CASAC for quality review and approval.

Dr. Russell asked if the Panel members had any additional questions or comments. Hearing none, Dr. Russell thanked the Panel members and EPA staff who participated at the teleconference. With the meeting business concluded, the Designated Federal Officer adjourned the meeting at 3:00 pm ET.

Respectfully Submitted:

/signed/

Mr. Edward Hanlon
Designated Federal Officer

Certified as Accurate:

/signed/

Dr. Ted Russell, Chair
CASAC Air Monitoring and
Methods Subcommittee

NOTE AND DISCLAIMER: The minutes of this public teleconference reflect diverse ideas and suggestions offered by Panel members during the course of deliberations within the teleconferences. Such ideas, suggestions and deliberations do not necessarily reflect consensus advice from the Panel members. The reader is cautioned to not rely on the minutes to represent final, approved, consensus advice and recommendations offered to the Agency. Such advice and recommendations may be found in the final advisories, commentaries, letters or reports prepared and transmitted to the EPA Administrator following the public meetings or teleconferences.

Materials Cited

The following meeting materials are available on the CASAC website (www.epa.gov/casac) on or through the following CASAC AMMS Near-Road November 17, 2011 teleconference webpage:

<http://yosemite.epa.gov/sab/sabproduct.nsf/bf498bd32a1c7fdf85257242006dd6cb/8326c3e4aab377028525792e0057b516!OpenDocument&Date=2011-11-17>

¹ Federal Register Notice announcing the teleconference

² Agenda for November 17, 2011 public teleconference

ATTACHMENT A – ROSTER

U.S. Environmental Protection Agency Clean Air Scientific Advisory Committee CASAC Air Monitoring and Methods Subcommittee (AMMS)

CHAIR

Dr. Armistead (Ted) Russell, Professor, Department of Civil and Environmental Engineering, Georgia Institute of Technology, Atlanta, GA

MEMBERS OF AMMS

Dr. David T. Allen, Professor, Department of Chemical Engineering, University of Texas, Austin, TX

Mr. George A. Allen, Senior Scientist, Northeast States for Coordinated Air Use Management (NESCAUM), Boston, MA

Dr. Linda Bonanno, Research Scientist, Office of Science/Division of Air Quality, New Jersey Department of Environmental Protection, Trenton, NJ

Dr. Doug Burns, Research Hydrologist, U.S. Geological Survey

Dr. Judith Chow, Research Professor, Desert Research Institute, Air Resources Laboratory, University of Nevada, Reno, NV

Dr. Kenneth Demerjian, Professor and Director, Atmospheric Sciences Research Center, State University of New York, Albany, NY

Mr. Eric Edgerton, President, Atmospheric Research & Analysis, Inc., Cary, NC

Mr. Henry (Dirk) Felton, Research Scientist, Division of Air Resources, Bureau of Air Quality Surveillance, New York State Department of Environmental Conservation, Albany, NY

Dr. Philip Fine, Atmospheric Measurements Manager, South Coast Air Quality Management District, Diamond Bar, CA

Dr. Philip Hopke, Bayard D. Clarkson Distinguished Professor, Department of Chemical and Biomolecular Engineering, Clarkson University, Potsdam, NY

Dr. Rudolf Husar, Professor, Mechanical Engineering, Engineering and Applied Science, Washington University, St. Louis, MO

Dr. Daniel Jacob, Professor, Atmospheric Sciences, School of Engineering and Applied Sciences, Harvard University, Cambridge, MA

Dr. Peter H. McMurtry, Professor, Department of Mechanical Engineering, University of Minnesota, Minneapolis, MN

Dr. Allen Robinson, Professor, Department of Engineering and Public Policy, Carnegie Mellon University, Pittsburgh, PA

Dr. James Jay Schauer, Professor , Department of Civil and Environmental Engineering, College of Engineering, University of Wisconsin - Madison, Madison, WI

Dr. Jay Turner, Associate Professor, Environmental & Chemical Engineering, Campus Box 1180, Washington University, St Louis, MO

Dr. Yousheng Zeng, Managing Partner, Providence Engineering & Environmental Group LLC, Baton Rouge, LA

SCIENCE ADVISORY BOARD STAFF

Mr. Edward Hanlon, Designated Federal Officer, U.S. Environmental Protection Agency, Washington, DC

ATTACHMENT B – Other Attendees

List of Members of the Public Who Requested Information for Calling into the Public Teleconferences of the EPA Clean Air Scientific Advisory Committee Air Monitoring and Methods Subcommittee (AMMS) for the Review of EPA's Draft Near-Road Technical Assistance Document

November 17, 2011

Name	Affiliation
Duvall, Misti	National Association of Clean Air Agencies
Harshfield, Gregory J.	Colorado Department of Public Health and the Environment
Kelley, Anna L.	Hamilton County Department of Environmental Services, Ohio
Lienemann, Kenneth A.	City of Albuquerque Environmental Health Department
Luben, Tom	USEPA
Madden, G. Renee'	State of South Carolina Department of Health and Environmental Control
McMahon, Bobby	Inside EPA
Ragan, Michael	Washington State Department of Ecology
Sponseller, Bart	Wisconsin Department of Natural Resources
Sweigert, Gayle M.	California Air Resources Board
Steger, Joette	State of North Carolina Department of Environment and Natural Resources